

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A management port for a wireless device platform, comprising:

a communication link, local to a microprocessor subsystem, to be used in inter-processor communication over an inter-processor bus for the wireless device platform, the communication link to provide an inbound link and an outbound link,

the inbound link providing a path for communications from the inter-processor bus to a peripheral bus of the microprocessor subsystem, the inbound link receiving communications from at least one processor or peripheral communicating over the inter-processor bus,

the outbound link providing a path for communications from the peripheral bus of the microprocessor subsystem to the inter-processor bus, the outbound link transmitting communications over the inter-processor bus to the at least one processor or peripheral, and

the communication link to control data flow over the inbound and outbound links, the microprocessor subsystem comprising a processor core, at least one processor subsystem, and a microprocessor bus system, the microprocessor bus system providing a communication path between the processor core and the at least one processor subsystem; and

a management block to receive command data from the at least one processor or peripheral through a predetermined logic channel in the inbound link, the management block providing a corresponding command signal on the microprocessor bus system, the command

signal performing a management function for the microprocessor system, the management block being further adapted to receive a response signal from the microprocessor bus system and the management block transmitting corresponding response data through a predetermined logic channel in the outbound link to the at least one processor or peripheral via the inter-processor bus, the management block including a manageability control module,

the manageability control module configured to apply a protocol for communicating over the microprocessor bus system, and

the manageability control module configured to provide access for allowing another microprocessor subsystem to perform the management function even when the processor core is not responsive.

2. (Previously Presented) The management port of claim 1, wherein the communication link includes a physical layer to provide both the inbound and outbound links with multiple logic channels, and a data link protocol to control data flow over the inbound and output links, and the management block provides the corresponding command signal directly on the microprocessor bus.

3. (Original) The management port of claim 1, wherein the management function includes a debug function.

4. (Original) The management port of claim 1, wherein the management function includes accessing memory.

5. (Original) The management port of claim 1, wherein the management function includes accessing configuration registers.

6. (Original) The management port of claim 1, wherein the management function

includes accessing a peripheral device of the microprocessor system.

7. (Previously Presented) The management port of claim 1, wherein the management block includes:

a command register connected to the microprocessor bus system and to the communication link, the command register to temporarily store the command data delivered through the predetermined logic channel in the inbound link;

a response register connected to the microprocessor bus system and to the communication link, the response register to temporarily store response data from the bus; and

a manageability controller connected to the microprocessor bus system, the command register, and the response register, the manageability controller being adapted to determine when command data is received at the command register and to transmit the corresponding command signal over the microprocessor bus system, and further being adapted to receive the response signal from the microprocessor bus system and store corresponding response data at the response register, and to transmit the response data through the predetermined logic channel in the outbound link.

8. (Currently Amended) A microprocessor system, comprising:

a processor core;

at least one processor subsystem to communicate with the processor core using at least one microprocessor bus;

a communication link connected to at least an inter-processor bus to enable inter-processor communication, the communication link to provide a multi-channel inbound link and a multi-channel outbound link, and to control data flow over a plurality of channels for both the multi-channel inbound and outbound links,

the multi-channel inbound link providing a path for communications from the inter-processor bus to a peripheral bus of the microprocessor system, the multi-channel inbound link receiving communications from at least one processor or peripheral communicating over the inter-processor bus, and

the multi-channel outbound link providing a path for communications from the peripheral bus of the microprocessor system to the inter-processor bus, the multi-channel outbound link transmitting communications over the inter-processor bus to the at least one processor or peripheral; and

a management block to receive command data from the at least one processor or peripheral using a predetermined logic channel in the multi-channel inbound link, the management block providing a corresponding command signal on the at least one microprocessor bus, the command signal performing a management function for at least one of the processor core and the at least one processor subsystem, the management block being further adapted to receive a response signal from the microprocessor bus and the management block transmitting corresponding response data through a predetermined logic channel in the outbound link to the at least one processor or peripheral via the inter-processor ~~bus~~-bus, the management block including a manageability control module,

the manageability control module configured to apply a protocol for communicating over the microprocessor bus, and

the manageability control module configured to provide access for allowing another microprocessor system to perform the management function even when the processor core is not responsive.

9. (Original) The microprocessor system of claim 8, wherein the management

function includes a debug function.

10. (Original) The microprocessor system of claim 8, wherein the at least one processor subsystem includes a memory controller.

11. (Original) The microprocessor system of claim 8, wherein the at least one processor subsystem includes configuration registers.

12. (Original) The microprocessor system of claim 8, wherein the at least one processor subsystem includes a security module.

13. (Original) The microprocessor system of claim 8, wherein the at least one processor subsystem includes a Universal Serial Bus (USB) client.

14. (Previously Presented) The microprocessor system of claim 8, further comprising a peripheral device, the management block being adapted to generate the corresponding command signal on the at least one microprocessor bus to perform a management function for the at least one peripheral device.

15. (Currently Amended) A microprocessor system for a wireless device, comprising:
a processor core and at least one processor subsystem;
at least one bus to connect the processor core to the at least one processor subsystem;

means for providing a multi-channel inbound link and a multi-channel outbound link, connected to at least an inter-processor bus for inter-processor communication in the wireless device, and to control data flow over a plurality of channels for both the multi-channel inbound and outbound links;

the multi-channel inbound link providing a path for communications from the inter-processor bus to a peripheral bus of the microprocessor system, the multi-channel

inbound link receiving communications from at least one processor or peripheral communicating over the inter-processor bus, and

the multi-channel outbound link providing a path for communications from the peripheral bus of the microprocessor system to the inter-processor bus, the multi-channel outbound link transmitting communications over the inter-processor bus to the at least one processor or peripheral; and

means for receiving command data from the at least one processor or peripheral through a predetermined logic channel in the inbound link, the means for receiving command data ~~providing a~~ providing a corresponding command signal on the bus with an appropriate communication protocol to perform a management function for at least one processor subsystem; and

means for providing access for allowing another microprocessor system to perform the management function even when the processor core is not responsive; and

means for receiving a response signal from the bus and transmitting corresponding response data through a predetermined logic channel in the outbound link to the at least one processor or peripheral via the inter-processor bus.

16. (Previously Presented) The microprocessor system of claim 15, wherein the means for receiving command data and the means for receiving a response signal include a management block comprising:

a command register connected to the bus, the command register to temporarily store the command data delivered through the predetermined logic channel in the multi-channel inbound link;

a response register connected to the bus, the response register to temporarily store response data from the bus; and

a manageability controller connected to the bus, the command register, and the response register, the manageability controller being adapted to determine when the command data is received at the command register and to transmit the corresponding command signal over the bus, and further being adapted to receive the response signal from the bus and store the corresponding response data at the response register, and to transmit the response data through the predetermined logic channel in the multi-channel outbound link.

17. (Original) The microprocessor system of claim 15, wherein the means for providing a multi-channel inbound link and a multi-channel outbound link for inter-processor communication in the wireless device includes means to provide a plurality of channels to communicate with an embedded communications microprocessor system.

18. (Original) The microprocessor system of claim 17, wherein the embedded communications microprocessor system is adapted to wirelessly communicate with at least one other devices.

19. (Currently Amended) A system, comprising:
an embedded applications microprocessor system and an embedded communications microprocessor system, each microprocessor system including a communication link to enable inter-processor communication over multiple channels;
a substantially omni-directional antenna connected to the embedded communications microprocessor system;

an inter-processor communication bus connected to the communication links of both the applications microprocessor system and the communications microprocessor system; and

the communication link of the applications microprocessor system being connected to at least an inter-processor bus, and including:

a multi-channel inbound link and a multi-channel outbound link, the communications link being adapted to control data flow over the multi-channel inbound and outbound links,

the multi-channel inbound link providing a path for communications from the inter-processor bus to a peripheral bus of the microprocessor system, the multi-channel inbound link receiving communications from at least one processor or peripheral communicating over the inter-processor bus, and

the multi-channel outbound link providing a path for communications from the peripheral bus of the microprocessor system to the inter-processor bus, the multi-channel outbound link transmitting communications over the inter-processor bus to the at least one processor or peripheral; and

a manageability port to allow the communications microprocessor system to access a microprocessor bus local to the applications microprocessor system using at least one predetermined channel and to perform management functions in the applications microprocessor system, the manageability port:

being adapted to receive command data from the at least one processor or peripheral through a predetermined logic channel in the inbound link,

applying a protocol for communicating over the microprocessor bus,

providing a corresponding command signal on the microprocessor bus, and further is adapted to receive a response signal from the microprocessor bus, and

providing access for allowing the communications microprocessor system to perform management functions even when a processor core of the applications microprocessor system is not responsive, and

transmitting corresponding response data through a predetermined logic channel in the outbound link to the at least one processor or peripheral via the inter-processor bus.

20. (Canceled)

21. (Currently Amended) The system of claim ~~20~~,19, wherein the embedded communications microprocessor system includes a microprocessor system adapted to wirelessly communicate with at least one other device.

22. (Original) The system of claim 21, wherein the microprocessor system is adapted to wirelessly communicate with at least one other devices using IEEE 802.11 technology.

23. (Original) The system of claim 21, wherein the microprocessor system is adapted to wirelessly communicate with at least one other device using cellular radio technology.

24. (Original) The system of claim 23, wherein the microprocessor is adapted to wirelessly communicate using general packet radio service (GPRS) technology.

25. (Original) The system of claim 23, wherein the microprocessor is adapted to wirelessly communicate using code division multiple access (CDMA) technology.

26. (Original) The system of claim 23, wherein the microprocessor is adapted to wirelessly communicate using wideband code division multiple access (WCDMA) technology.

27. (Original) The system of claim 19, the embedded communications microprocessor system includes:

a microprocessor system adapted to wirelessly communicate with at least one other devices using an IEEE 802.11 technology; and

a microprocessor system adapted to wirelessly communicate with at least one other device using cellular radio technology.

28. (Currently Amended) A method, comprising:

receiving an inter-processor communication signal at a communications link for a microprocessor system, the communication link connected at least to an inter-processor bus, and used to provide a multi-channel inbound link and a multi-channel outbound link for the microprocessor system, and to control inter-processor data flow over the multi-channel inbound and outbound links, wherein receiving an inter-processor communication signal includes receiving a signal using a predetermined channel of the multi-channel inbound link, the signal including command data to perform a management function for a microprocessor subsystem,

the multi-channel inbound link providing a path for communications from the inter-processor bus to a peripheral bus of the microprocessor system, the multi-channel inbound link receiving communications from at least one processor or peripheral communicating over the inter-processor bus,

the multi-channel outbound link providing a path for communications from the peripheral bus of the microprocessor system to the inter-processor bus, the multi-channel outbound link transmitting communications over the inter-processor bus to the at least one processor or peripheral; ~~and~~

processing the command data to generate and transmit a corresponding command signal on a microprocessor bus local to the microprocessor system using an appropriate bus communication protocol to perform the management ~~function~~ function; and

providing access for allowing another microprocessor system to perform the management function even when a processor core of the microprocessor system is not responsive.

29. (Previously Presented) The method of claim 28, further comprising:
processing a response signal received over the microprocessor bus from the microprocessor subsystem into a response data; and

transmitting a signal that includes the response data using a predetermined channel of the outbound link.

30. (Original) The method of claim 29, wherein:
processing the command data includes routing the command data through a command register in preparation to transmit the corresponding command signal on the microprocessor bus; and

processing a response signal received over the microprocessor bus from the microprocessor subsystem into response data includes routing the response data through a response register in preparation to transmit the signal that includes the response data using the predetermined channel on the outbound link.